

## WEST Search History

DATE: Tuesday, January 03, 2006

<u>Hide?</u>	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
	<i>DB=PGPB,USPT; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L26	L25 and (coupling agent)	0
<input type="checkbox"/>	L25	L22 and bristles	16
<input type="checkbox"/>	L24	L22 and (polyvinyl alcohol polymer)	0
<input type="checkbox"/>	L23	L22 and (polyvinyl alcohol polymer) and bristles	0
<input type="checkbox"/>	L22	116 and (134/6.ccls.)	37
<input type="checkbox"/>	L21	116 and 134/\$.ccls.	104
<input type="checkbox"/>	L20	L18 and ligands	2
<input type="checkbox"/>	L19	L18 with ligands	0
<input type="checkbox"/>	L18	L16 with attach\$	380
<input type="checkbox"/>	L17	L16 with attach\$	380
<input type="checkbox"/>	L16	brush with forming	7059
	<i>DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L15	L12 and wafer\$	1
<input type="checkbox"/>	L14	L12 with wafers	0
<input type="checkbox"/>	L13	L12 with \$wafer\$	0
<input type="checkbox"/>	L12	L10 with (clean\$ or decontaminat\$)	75
<input type="checkbox"/>	L11	L10 and ligands	0
<input type="checkbox"/>	L10	18 with attach\$	330
<input type="checkbox"/>	L9	18 with attach\$ with ligand\$	0
<input type="checkbox"/>	L8	brush with forming	7611
	<i>DB=EPAB; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L7	CN-1486995-A.did.	0
	<i>DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L6	brush with ligands	4
	<i>DB=PGPB,USPT; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L5	L1 and \$wafer\$	1
<input type="checkbox"/>	L4	L1 with \$wafer\$	1
<input type="checkbox"/>	L3	L2 with clean\$	1
<input type="checkbox"/>	L2	L1 with polymer	3
<input type="checkbox"/>	L1	brush with ligands	32

END OF SEARCH HISTORY

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L6: Entry 4 of 4

File: DWPI

Apr 7, 2004

DERWENT-ACC-NO: 2004-719387

DERWENT-WEEK: 200471

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TITLE: Multiple-arm star-shaped super-branched polymer brush with several hydroxy groups and its prepn process

Basic Abstract Text (1):

NOVELTY - The preparation of multiple-arm star-shaped super-branched polymer brush with several hydroxy groups includes the following steps: reaction between the super-branched polymer with end hydroxy group or end amino group and alpha-halo acyl halide to produce super-branched macro molecular initiator; atom transferring free radical polymerization with the macro molecular initiator and in the presence of catalyst and ligand to produce multiple-arm star-shaped super-branched polymer brush; further atom transferring free radical polymerization to initiate the polymerization of hydroxy containing double-bond monomer with the polymer brush as initiator and in the presence of catalyst and ligand; precipitation in precipitant, filtering, separation and drying to obtain target polymer. The polymer contains great amount of hydroxy group, has high solubility, and is suitable for use as biomedicine carrier, efficient paint, crosslinking agent, water absorbent, etc.

[Previous Doc](#)      [Next Doc](#)      [Go to Doc#](#)

CN 1486995 A

✓  
published 4/7/04

## Hit List

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Search Results - Record(s) 1 through 4 of 4 returned.

☐ 1. Document ID: JP 63177149 A

L6: Entry 1 of 4

File: JPAB

Jul 21, 1988

PUB-NO: JP363177149A

DOCUMENT-IDENTIFIER: JP 63177149 A

TITLE: CARRIER FOR MAGNETIC DEVELOPMENT

PUBN-DATE: July 21, 1988

INVENTOR-INFORMATION:

NAME

COUNTRY

SARUWATARI, NORIO

KO, KATSUJI

WATANUKI, TSUNEO

KATAGIRI, YOSHIMICHI

KASHIWAGAWA, TAKAHIRO

TATEIWA, YOSHIHIRO

US-CL-CURRENT: 430/111.31; 430/137.1

INT-CL (IPC): G03G 9/10; G03G 15/09

ABSTRACT:

PURPOSE: To decrease sticking of a carrier to a photosensitive body by granulating a mixture prep'd. by dispersing fine magnetic particles into a metallic complex-base org. magnetic material obtd. from a metal salt and org. compd.

CONSTITUTION: The magnetic particles formed by dispersing the fine magnetic particles into the polynuclear metallic complex-base org. magnetic material obtd. by reaction of the metal salt compd. contg. a ferromagnetic transition metal and the polymer bonded with an arom. heterocyclic compd. having  $\geq 2$  ligand elements and an arom. heterocyclic compd. having  $\geq 2$  coordination elements at the side chain are used as the carrier for magnetic brush development. Since the developer formed by using such carrier is low in sp. gr. and light in weight, the impact force by mixing and agitation with a toner is decreased and the longer life of the developer is obtd.; in addition, the higher saturation magnetization is obtd. Sticking of the carrier to the photosensitive body is obviated and an excellent printing characteristic is obtd. even in a method for using an ordinary two-component developer of larger grain sizes.

COPYRIGHT: (C)1988, JPO&Japio

Full	Title	Citation	Front	Review	Classification	Date	Reference	Summary	Abstract	Claims	KWC	Draw. De
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☐ 2. Document ID: WO 2005069900 A2

L6: Entry 2 of 4

File: EPAB

Aug 4, 2005

PUB-NO: WO2005069900A2

DOCUMENT-IDENTIFIER: WO 2005069900 A2

TITLE: NPC1L1 (NPC3) AND METHODS OF IDENTIFYING LIGANDS THEREOF

PUBN-DATE: August 4, 2005

## INVENTOR-INFORMATION:

NAME

COUNTRY

GARCIA-CALVO, MARGARITA

US

## ABSTRACT:

CHG DATE=20050816 STATUS=O>The present invention provides human, rat and mouse NPC1L1 polypeptides and polynucleotides encoding the polypeptides. Methods for detecting ligands which bind to NPC1L1 and block intestinal cholesterol absorption are provided. Also included is a method of identifying ligands which bind to NPC1L1 using membranes derived from brush border membrane preparations. Compounds that bind to NPC1L1 can be used for inhibiting intestinal cholesterol absorption in a subject.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw. De
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☐ 3. Document ID: US 20050092350 A1

L6: Entry 3 of 4

File: DWPI

May 5, 2005

DERWENT-ACC-NO: 2005-365097

DERWENT-WEEK: 200537

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TITLE: Formation of polymer brush for cleaning and/or scrubbing semiconductor wafers, useful for semiconductor integrated circuit fabrication, by attaching ligands along length of polymer

INVENTOR: BUEHLER, M

PRIORITY-DATA: 2003US-0698323 (October 31, 2003)

## PATENT-FAMILY:

PUB-NO

PUB-DATE

LANGUAGE

PAGES

MAIN-IPC

US 20050092350 A1May 5, 2005

004

B08B007/00

INT-CL (IPC): B08B 7/00

ABSTRACTED-PUB-NO: US20050092350A

BASIC-ABSTRACT:

NOVELTY - A polymer brush for cleaning semiconductor wafers, is formed by attaching ligands along the length of a polymer.

USE - The invention is for formation of a polymer brush for cleaning semiconductor wafers (claimed). The brush is used for scrubbing semiconductor wafers, useful for semiconductor integrated circuit fabrication.

ADVANTAGE - The inventive brush provides better cleaning, thus reducing the defects in semiconductor wafers.

DESCRIPTION OF DRAWING(S) - The figure is a schematic depiction of a chemical process.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 4. Document ID: CN 1486995 A

L6: Entry 4 of 4

File: DWPI

Apr 7, 2004

DERWENT-ACC-NO: 2004-719387

DERWENT-WEEK: 200471

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TITLE: Multiple-arm star-shaped super-branched polymer brush with several hydroxy groups and its prepn process

INVENTOR: GAO, C; QIAN, H ; YAN, D

PRIORITY-DATA: 2003CN-0141981 (July 31, 2003)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>CN 1486995 A</u>	April 7, 2004		000	C08F020/00

INT-CL (IPC): C08F 2/00; C08F 20/00

ABSTRACTED-PUB-NO: CN 1486995A

BASIC-ABSTRACT:

NOVELTY - The preparation of multiple-arm star-shaped super-branched polymer brush with several hydroxy groups includes the following steps: reaction between the super-branched polymer with end hydroxy group or end amino group and alpha-halo acyl halide to produce super-branched macro molecular initiator; atom transferring free radical polymerization with the macro molecular initiator and in the presence of catalyst and ligand to produce multiple-arm star-shaped super-branched polymer brush; further atom transferring free radical polymerization to initiate the polymerization of hydroxy containing double-bond monomer with the polymer brush as initiator and in the presence of catalyst and ligand; precipitation in precipitant, filtering, separation and drying to obtain target polymer. The polymer contains great amount of hydroxy group, has high solubility, and is suitable for use as biomedicine carrier, efficient paint, crosslinking agent, water absorbent, etc.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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[Clear](#)[Generate Collection](#)[Print](#)[Fwd Refs](#)[Bkwd Refs](#)[Generate OACS](#)

Term	Documents
BRUSH	105939
BRUSHES	25290
LIGANDS	13479
LIGAND	32291
(LIGANDS WITH BRUSH).EPAB,JPAB,DWPI,TDBD.	4
(BRUSH WITH LIGANDS).EPAB,JPAB,DWPI,TDBD.	4

**Display Format:** [REV](#)[Change Format](#)[Previous Page](#)[Next Page](#)[Go to Doc#](#)

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Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: JP 2005238011 A

L15: Entry 1 of 1

File: DWPI

Sep 8, 2005

DERWENT-ACC-NO: 2005-586857

DERWENT-WEEK: 200560

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TITLE: Jig for attaching or detachment of cleaning brush of glass substrate of LCD, has holding structure inserted within holes formed in jig main structures, for connecting the jig main structures

INVENTOR: HIROSE, H; TERADA, M

PRIORITY-DATA: 2004JP-0047772 (February 24, 2004)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>JP 2005238011 A</u>	September 8, 2005		008	B08B013/00

INT-CL (IPC): B08 B 13/00; H01 L 21/304

ABSTRACTED-PUB-NO: JP2005238011A

BASIC-ABSTRACT:

NOVELTY - The jig comprises a holding structure (21) inserted within the holes (28) formed in the jig main structures (20), for connecting the jig main structures. A pair of securing nails (31) is inserted within the holes (21a) and attachment holes (27) formed in jig main structures for aligning the brushes (8,9) engaged with the jig main structures, with respect to the jig main structures.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for cleaning brush for attachment/detachment method.

USE - For attachment or detachment of cleaning brush of glass substrate of LCD and semiconductor wafer of semiconductor device.

ADVANTAGE - By connecting the jig main structures, using a holding structure, the attachment or detachment operation of the cleaning brushes is simplified.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective diagram of jig and cleaning brush. (Drawing includes non-English language text).

cleaning brushes 8,9

jig main structure 20



holding structure 21

holes 21a,28

attachment hole 27

securing nail 31

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw. Des
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Term	Documents
WAFER\$	0
WAFER	205483
WAFERA	1
WAFERABLE	1
WAFERACCOMMODATING	1
WAFERAND	8
WAFERAUFNAHME	1
WAFERBAKING	1
WAFERBOARD	67
WAFERBOARDS	2
(L12 AND WAFER\$).EPAB,JPAB,DWPI,TDBD.	1

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Search Results - Record(s) 1 through 10 of 16 returned.

☐ 1. Document ID: US 20050199265 A1

Using default format because multiple data bases are involved.

L25: Entry 1 of 16

File: PGPB

Sep 15, 2005

PGPUB-DOCUMENT-NUMBER: 20050199265

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050199265 A1

TITLE: Stain-removal brush

PUBLICATION-DATE: September 15, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
France, Paul Amaat Raymond Gerard	West Chester	OH	US
Daubenspeck, Bradley Wayne	West Chester	OH	US
Girard, Linda Shumansky	Union	KY	US
Jacobs, Stephen Allen	Fairfield	OH	US
Mastrigli, Roberto	Etterbeek		BE
Litten, Neil Anthony	Egham		GB
Boyd, Graham John	Beijing		CN
Spooner, Gregory Clegg	Hong Kong		CN

US-CL-CURRENT: [134/6](#); [15/28](#), [15/97.1](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. De
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☐ 2. Document ID: US 20050109375 A1

L25: Entry 2 of 16

File: PGPB

May 26, 2005

PGPUB-DOCUMENT-NUMBER: 20050109375

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050109375 A1

TITLE: Vent cleaning system

PUBLICATION-DATE: May 26, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
------	------	-------	---------

Peterson, Scott

Ft. Worth

TX

US

US-CL-CURRENT: [134/22.1](#); [134/21](#), [134/6](#)

## ABSTRACT:

An improved vent cleaning apparatus for removing dust from air conditioning and heating vents and wherein unnecessary torque loads on the flexible shaft are eliminated by the presence of swivel cuff means between the exhaust opening where the flexible tubular conduit containing the shaft is connected to the apparatus and the flexible tubular conduit itself.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 3. Document ID: US 20050066996 A1

L25: Entry 3 of 16

File: PGPB

Mar 31, 2005

PGPUB-DOCUMENT-NUMBER: 20050066996

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050066996 A1

TITLE: Stain-removal brush including cleaning composition dispenser

PUBLICATION-DATE: March 31, 2005

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
France, Paul Amaat Raymond Gerard	West Chester	OH	US
Daubenspeck, Bradley Wayne	West Chester	OH	US
Colman, Arne Benjamin	Newark		GB

US-CL-CURRENT: [134/6](#); [15/28](#), [15/29](#)

## ABSTRACT:

A motorized stain-removal brush having a cleaning composition dispenser is provided. A method of using the motorized stain-removal brush for cleaning inanimate surfaces is also provided. The motorized stain-removal brush includes a handle having a motor disposed therein, a head having a longitudinal axis, and a neck disposed between the handle and the head. Bristle holders are associated with the head. The motor is operatively connected to the bristle holder.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 4. Document ID: US 20040261819 A1

L25: Entry 4 of 16

File: PGPB

Dec 30, 2004

PGPUB-DOCUMENT-NUMBER: 20040261819

PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20040261819 A1

TITLE: Coating brush cleaning and storing apparatus and method

PUBLICATION-DATE: December 30, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Farnoush, Ira	Woodland Hills	CA	US
Sinay, Yehuda	Van Nuys	CA	US

US-CL-CURRENT: 134/6; 15/104.92, 15/142, 15/257.01

ABSTRACT:

A brush cleaning and storing apparatus, particularly for storing of paint brushes and coating brushes and brushes of like material, in such Manner that the brush can be introduced into a solvent and then rubbed against a plate having a surface which aids in removal of the paint or similar substance. In addition, the apparatus and the method provide for suspending the brush in a housing of the apparatus. In this way, the solvent is contained within the housing, thereby avoiding environmental nuisance problems associated with the disposing of the solvent, and which also enables the reuse thereof.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWMC	Draw. Des
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☐ 5. Document ID: US 20040084062 A1

L25: Entry 5 of 16

File: PGPB

May 6, 2004

PGPUB-DOCUMENT-NUMBER: 20040084062  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20040084062 A1

TITLE: Brush assembly distribution apparatus

PUBLICATION-DATE: May 6, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Theiss, William H. JR.	Canton	OH	US
Bauman, Robert W.	North Canton	OH	US
Buxton, Dale L.	Canton	OH	US
Rennecker, David B.	Canton	OH	US

US-CL-CURRENT: 134/6; 15/50.1

ABSTRACT:

A floor-scrubbing machine is provided having a main body and a cleaning fluid

delivery system. At least one rotatable brush having a brush body and bristles extending from the brush body is included. The brush is carried by the main body whereby the bristles of the brush engage the floor being scrubbed. A fluid distributor is provided to distribute cleaning fluid supplied to the fluid distributor to the brush. The brush defines a recess having a sidewall and at least one opening formed in the sidewall for distributing the cleaning solution radially outward.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Drawings
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☐ 6. Document ID: US 20030102009 A1

L25: Entry 6 of 16

File: PGPB

Jun 5, 2003

PGPUB-DOCUMENT-NUMBER: 20030102009

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030102009 A1

TITLE: Pool brush with dual-position hydrofoil and method for steering

PUBLICATION-DATE: June 5, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Fortier, Rejean	Hollywood	FL	US

US-CL-CURRENT: 134/6; 15/1.7

ABSTRACT:

A pool brush includes a hydrofoil moving on a hinge. The hydrofoil provides downforce on the surface being brushed regardless of the direction of the pool brush (pulled or pushed). Adjustable front and rear stops allow the amount of downforce to be adjusted and to compensate for larger and deeper pools. The hydrofoil also creates a method for laterally steering the pool brush by twisting the handle.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Drawings
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☐ 7. Document ID: US 20020096191 A1

L25: Entry 7 of 16

File: PGPB

Jul 25, 2002

PGPUB-DOCUMENT-NUMBER: 20020096191

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020096191 A1

TITLE: Apparatus and method for wafer cleaning

PUBLICATION-DATE: July 25, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Lofaro, Michael F.	Milton	NY	US
Mattaroccia, Marc	New Windsor	NY	US
Stevens, Leonard C. JR.	Poughquag	NY	US

US-CL-CURRENT: 134/6; 134/18, 134/902, 15/102, 15/77, 15/88.2

## ABSTRACT:

A semiconductor wafer is cleaned while a sponge or brush is pressed against the wafer with a constant forced applied utilizing a bias in a constant force pencil. The wafer is cleaned in the state wherein a collapsing portion of the constant force pencil with respect to the cleaning sponge cloth is set in such a way that the cleaning pressure, which is applied from the cleaning sponge to the wafer, can be constant and is adjustable. A method for cleaning wafers using a constant force pencil is also described.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw. De
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☐ 8. Document ID: US 20010017144 A1

L25: Entry 8 of 16

File: PGPB

Aug 30, 2001

PGPUB-DOCUMENT-NUMBER: 20010017144

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010017144 A1

TITLE: Method and device for removing particles from webs of material

PUBLICATION-DATE: August 30, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Flament, Daniel	igny		FR

US-CL-CURRENT: 134/6; 134/21

## ABSTRACT:

A method for removing from at least single-layer webs of material, particles formed by slitting devices which are arranged along a web travel path in a slitting zone, includes generating a suction zone associated with the slitting devices in accordance with the position of a cutting location; a device for performing the method; a jobbing web-fed rotary printing machine including the device; and a newspaper rotary printing machine including the device.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw. De
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☐ 9. Document ID: US 6673159 B1

L25: Entry 9 of 16

File: USPT

Jan 6, 2004

US-PAT-NO: 6673159

DOCUMENT-IDENTIFIER: US 6673159 B1

TITLE: Cleaning brush and method for removing contaminates from a photoconductor film

DATE-ISSUED: January 6, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Jones; Kurt E.	Webster	NY		
Fisher; Douglas D.	Marion	NY		

US-CL-CURRENT: 134/6; 134/21, 134/9, 15/102, 15/300.1, 15/363, 15/77

## ABSTRACT:

A method and a cleaning brush for removing contaminants from and extending the life of a photoconductor film wherein the cleaning brush has end sections having a reduced coefficient of friction with the end sections of the photoconductor film which are less frequently used.

16 Claims, 6 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Exemplary Claims	Attorneys	Claims	KWIC	Draw. Des.
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☐ 10. Document ID: US 6648979 B2

L25: Entry 10 of 16

File: USPT

Nov 18, 2003

US-PAT-NO: 6648979

DOCUMENT-IDENTIFIER: US 6648979 B2

TITLE: Apparatus and method for wafer cleaning

DATE-ISSUED: November 18, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lofaro; Michael F.	Milton	NY		
Mattaroccia; Marc	New Windsor	NY		
Stevens, Jr.; Leonard C.	Poughquag	NY		

US-CL-CURRENT: 134/6; 134/104.2, 134/2, 134/21, 134/32, 134/44, 134/84, 451/10, 451/286, 451/287, 451/288, 451/331, 451/394

## ABSTRACT:

A semiconductor wafer is cleaned while a sponge or brush is pressed against the wafer with a constant forced applied utilizing a bias in a constant force pencil. The wafer is cleaned in the state wherein a collapsing portion of the constant force pencil with respect to the cleaning sponge cloth is set in such a way that the cleaning pressure, which is applied from the cleaning sponge to the wafer, can be constant and is adjustable. A method for cleaning wafers using a constant force pencil is also described.

24 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw De
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Term	Documents
BRISTLES	17677
BRISTLE	9207
(22 AND BRISTLES) .PGPB,USPT.	16
(L22 AND BRISTLES) .PGPB,USPT.	16

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☐ 11. Document ID: US 6137861 A

Using default format because multiple data bases are involved.

L25: Entry 11 of 16

File: USPT

Oct 24, 2000

US-PAT-NO: 6137861

DOCUMENT-IDENTIFIER: US 6137861 A

TITLE: Portable self-contained x-ray cassette maintenance system and method

DATE-ISSUED: October 24, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Reina; Leo	Cary	IL		
Sorgani; James	Cary	IL		

US-CL-CURRENT: [378/174](#); [134/21](#), [134/6](#), [15/1.51](#), [15/310](#), [15/314](#), [15/323](#), [378/167](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	References	Attachments	Claims	KWIC	Draw De
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☐ 12. Document ID: US 5951780 A

L25: Entry 12 of 16

File: USPT

Sep 14, 1999

US-PAT-NO: 5951780

DOCUMENT-IDENTIFIER: US 5951780 A

TITLE: Surface treatment method and apparatus including brush means and impact means mounted on a single shaft

DATE-ISSUED: September 14, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pettigrew; Rodney Mackenzie	Taringa			AU

US-CL-CURRENT: [134/6](#); [134/15](#), [134/21](#), [134/32](#), [134/33](#), [134/9](#), [15/141.2](#), [15/355](#), [15/356](#), [15/366](#), [15/4](#), [15/41.1](#), [15/5](#)

ABSTRACT:

Surface treatment apparatus having impact elements for impacting a surface to be

treated, a brush element for brushing the surface, a drive device for operating the impact element and the brush elements, and a carriage device enabling the surface treatment apparatus to be moved across the surface to be treated. The brush elements include a composite rotary brush assembly having circumferentially spaced rows of bristles mounted on a rotatable shaft in alternate circumferential sequence with the impact elements and further rotary assembly mounted on a contra-rotation relative to the composite rotary brush assembly and/or the impact elements, each rotatable so their bristles move upwardly intermediate the respective shafts. The impact elements include a plurality of longitudinal spaced hammers each pivotable about an axis substantially parallel to the axis of the rotatable shaft. The surface treatment apparatus may also include height adjustment elements for adjusting the engagement between the impact elements and the brush elements with a surface to be treated, and may further include an induction device for inducing a flow of brushed particulate material to a discharge through an upstanding duct. In use, brushed particulate material is lifted above the surface and separated from the surface based on the density of the brushed particulate material.

15 Claims, 7 Drawing figures

Exemplary Claim Number: 13

Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. Des.
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☐ 13. Document ID: US 5707454 A

L25: Entry 13 of 16

File: USPT

Jan 13, 1998

US-PAT-NO: 5707454

DOCUMENT-IDENTIFIER: US 5707454 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Method for removing spots from carpet

DATE-ISSUED: January 13, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Middleton; Ernest W.	Racine	WI		

US-CL-CURRENT: 134/6; 134/42, 15/106, 15/160, 15/172, 15/176.2, 15/DIG.5

ABSTRACT:

The method substantially removes a soil spot (resulting from a beverage spill or the like) from a carpet by using a particular type of brush. The brush has (a) a detachable handle, (b) a body with a pair of holes therein for attaching the handle to the body at either hole, and (c) first and second brush portions on first and second brush faces, respectively. The brush portions have differing stiffnesses and either portion may be used to "de-spot" carpet by inserting the handle in the appropriate attachment hole. The method includes the steps of identifying the tuft and pile characteristics of the spot-soiled area of carpet and selecting one of the brush portions for use in removing the spot on carpet having such characteristics. The handle is attached to the hole related to the selected brush portion, a granular cleaning product is deposited on the spot and such product is "worked"

across and through that portion of the carpet which includes the spot.

3 Claims, 14 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw. De
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☐ 14. Document ID: US 5487397 A

L25: Entry 14 of 16

File: USPT

Jan 30, 1996

US-PAT-NO: 5487397

DOCUMENT-IDENTIFIER: US 5487397 A

TITLE: Pool brush hydrofoil

DATE-ISSUED: January 30, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bean; Richard A.	Dallas	TX	75230	

US-CL-CURRENT: 134/6; 15/1.7, 15/160, 15/246

ABSTRACT:

A hydrofoil (10) is disclosed for attachment to a pool brush (12) to facilitate cleaning the side walls of a pool. The hydrofoil is pivotally attached to the handle through a resilient clip (30) passing through a pair of opposed holes (24) in the hydrofoil (10) and received in matching engagement pin receiving apertures (48, 50) in a notch (46) in the hydrofoil (10). As the pool brush (12) is moved up and down along the side of the pool, the hydrofoil pivots and causes the water to force the pool brush against the side of the pool to facilitate cleaning.

9 Claims, 3 Drawing figures

Exemplary Claim Number: 6

Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw. De
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☐ 15. Document ID: US 4853041 A

L25: Entry 15 of 16

File: USPT

Aug 1, 1989

US-PAT-NO: 4853041

DOCUMENT-IDENTIFIER: US 4853041 A

TITLE: Method of cleaning a carpet

DATE-ISSUED: August 1, 1989

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Clardy; Bobbie	Grapevine	TX	76051	

US-CL-CURRENT: 134/6; 15/160, 15/DIG.5

## ABSTRACT:

A hand held brush specifically adapted for sweeping and cleaning regions of carpet. The brush is constructed with a handle portion in which is secured a field of bristles in a slanted bristle array. The bristle length tapers downwardly from the frontal edge of the brush to the rear edge and the flexibility varies accordingly. In this manner, the bristles may be swept through an area of carpet to remove both large and small dirt and lint particles by utilizing the varying flexibility of the bristles concomittantly with the tapering length thereacross.

3 Claims, 2 Drawing figures  
Exemplary Claim Number: 1  
Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. Des.
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☐ 16. Document ID: US 4595420 A

L25: Entry 16 of 16

File: USPT

Jun 17, 1986

US-PAT-NO: 4595420

DOCUMENT-IDENTIFIER: US 4595420 A

TITLE: Method and apparatus for cleaning and maintaining carpet

DATE-ISSUED: June 17, 1986

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Williams, III; Robert C.	Raleigh	NC	27612	
Williams; Stephen R.	Cary	NC	27511	
Weil; Robert R.	Raleigh	NC	27614	

US-CL-CURRENT: 134/6; 134/21, 134/30, 134/37, 15/320, 15/321, 15/328, 15/353

## ABSTRACT:

The present invention entails a method and apparatus for cleaning and maintaining large areas of low to medium pile carpet, such as is found in hotels, airports, etc. The invention employs a mobile carpet cleaning machine which is propelled over the carpet to be cleaned. The principal features of the carpet cleaning machine are an elongated cylindrical brush, a vacuum system with a floating vacuum head, and a blower. In operation the cylindrical brush is set into a rotating motion and engages the underlying carpet. A cleaning solution is sprayed onto the rotating

brush which in turn transfers the solution onto the underlying carpet. The vacuum head then passes over the carpet directly behind the rotating brush. The blower pulls air through the vacuum head and the vacuum head effectively picks up a combined mixture of air and solution. This mixture of air and solution is pulled upwardly from the vacuum head into the top of a recovery tank. Once the mixture enters the tank, the solution falls out and the air is induced up into a tube where the air is then directed to the blower. Once in the blower, the air is heated and directed back down onto the carpet through an outlet located directly behind the vacuum head for the purpose of drying the carpet. Thus the entire cleaning operation requires only one pass over the carpet.

24 Claims, 8 Drawing figures  
Exemplary Claim Number: 14,20  
Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Subclasses	Attachments	Claims	KWIC	Drawn De
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Term	Documents
BRISTLES	17677
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